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ABSTRACT

As the new special education Title 5 regulations for eligibility criteria are implemented throughout California, a major concern is their impact on the learning handicapped student population. During the past two years, the effects of implementing criteria similar to those adopted by California have been studied in a large suburban district. The studies gathered test score information, grade, psychological processing information and user reactions. In addition, the 1982-83 study analyzed information on 225 students identified as having specific learning disabilities to determine the amount of the ability-achievement discrepancy, the effects of applying part or full-scale ability scores, and to compare the number of identifications with those of previous years. Findings from the 1982-83 study included confirmation of the criteria as identifying students from average ability ranges and support from users that the criteria are appropriate for identifying students with learning disabilities. (Author)

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SPECIFIC LEARNING DISABILITY:

MEASURING EFFECTS OF THE NEW STATE CRITERIA

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Abstract

Specific Learning Disability: Measuring Effects of the New State Criteria

As the new special education Title 5 regulations for eligibility criteria are implemented throughout California, a major concern is their impact on the learning handicapped student population.

During the past two years, the effects of implementing criteria similar to those adopted by California have been studied in a large suburban district. The studies gathered test score information, grade, psychological processing information and user reactions. In addition, the 1982-83 study analyzed information on 225 students identified as having specific learning disabilities to determine the amount of the ability-achievement discrepancy, the effects of applying part or full-scale ability scores, and to compare the number of identifications with those of previous years.

Findings from the 1982-83 study included confirmation of the criteria as identifying students from average ability ranges and support from users that the criteria are appropriate for identifying students with learning disabilities.

SPECIFIC LEARNING DISABILITY: MEASURING EFFECTS OF THE NEW STATE CRITERIA

Introduction

During the Spring of 1981, a San Juan task force of special education staff members developed revised criteria for the identification of students with specific learning disabilities (SLD). The revised criteria were developed to be more compatible with the intent of the Federal criteria for specific learning disabilities.

Changes in the criteria included (1) defining a severe discrepancy between ability and achievement (rather than low achievement alone), (2) using individually-administered ability tests (rather than assuming that student ability was normal), and (3) requiring evidence of a processing disorder. It was expected that the revised criteria would more appropriately identify students with a "specific learning disability," and that their use would reduce the actual number of new identifications.

The criteria developed in San Juan for the identification of students with specific learning disabilities, and used during the period 1981-1983, differ from the state criteria in their application, as a consistent standard score difference was selected for use in San Juan. This uniform or consistent score difference was based upon the median ability-achievement test correlation for the tests most frequently used in San Juan.

The difference score used in San Juan was equal to 1.5 standard deviations, or 22 common standard score points. This discrepancy is similar to the State-specified 1.5 standard deviations of the difference score distribution, but it does not vary when different tests are used. This study reports on the effects of applying the State-specified standard deviation of the difference score distribution formula as well as the uniform difference score previously in use.

Study Design

To produce this report, several types of information were required. One type of information was related to tests and test scores. Another type of information was that recorded in the students' IEPs related to psychological processing disorders, evidence of prior interventions and specification of no other contributing factor. The last type of information was principals' and psychologists' perceptions regarding use of the criteria.

Record sheets were prepared on which student information was entered. Students were given reference numbers to ensure confidentiality. The types of information picked up from the IEP included the identifying achievement test information, grade, birth year, psychological processing deficit, recorded elimination of other disorders and evidence of prior classroom modifications. The total ability test scores (as well as both verbal and performance subtest scores for the WISC-R) were retrieved and added to the IEP information. In this study all scores were reported as common standard scores with a mean of 100 and a standard deviation of 15.

After the information was recorded, the student records were key punched and analyzed using the Statistical Package for the Social Sciences (SPSS) through the California State University, Sacramento, computer center.

Study Findings

Academic Achievement Test Results

The achievement test scores reported in common standard scores (M=100, SD=15), ranged from a low of 55 to a high of 99 across all areas, with only one exception: a gifted student with an achievement score of 122. The median achievement scores in reading, written expression or math ranged from 75 to 80. The score ranges and median scores are presented in Table 1. The achievement test results were almost identical to those of the previous year.

Table 1

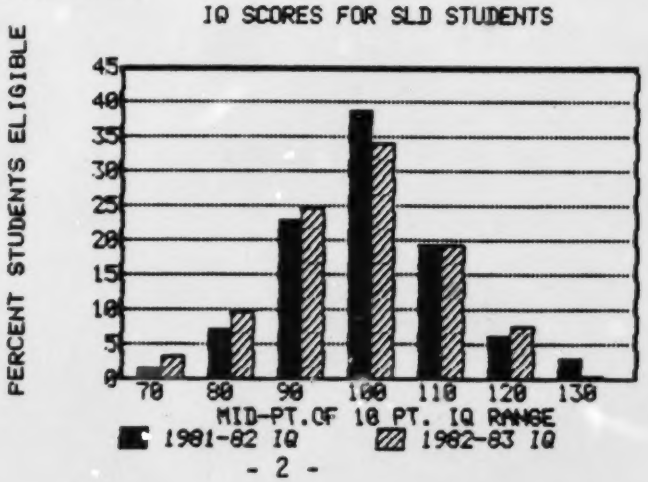
Standard Score and Ability-Achievement Discrepancy Score Ranges and Medians for 225 Students With Identified Specific Learning Disabilities

Ability/Achievement Test Area	Number of Students	Standard Score Range	Median Score	Discrepancy Score Range	Median Score Discrepancy
Ability (Full Scale)	(225)	71 - 141	99		
Reading	(100)	59 - 99	77	18 - 55	27
Math	(140)	55 - 122	76	19 - 53	26
Written Expression	(17)	65 - 94	75	18 - 60	29
Oral Expression	(5)	62 - 84	80	22 - 38	24
Listening Comprehension	(5)	61 - 76	70	21 - 34	32

Ability Test Results

The full scale ability test scores found for the students identified as having specific learning disabilities formed a normal-appearing distribution. Ability test scores ranged from a low of 71 to a high of 141, with a median of 99. For the most part, this ability range corresponds with that of the 96 percent of the population considered to fall within "average" ability levels. The relative percent of eligible students with various ranges of ability scores is shown in Figure 1 for both 1981-2 and 1982-3. No significant differences were found between the ability scores for the two years.

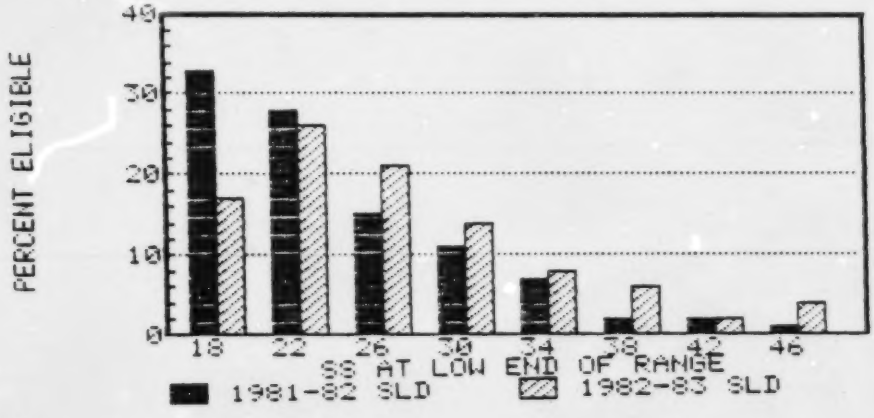
FIGURE 1.



Discrepancy Scores

Discrepancy scores were computed by subtracting the achievement score from the ability score. Discrepancy scores had a range of from 18 to 55 points, with medians varying from 24 to 32, depending upon the achievement test area. These discrepancy figures are based upon using the highest ability score of the verbal, performance, or total. The relative percent of eligible students with varying standard score discrepancy points is shown in Figure 2. The major difference from the 1981-82 year was a decrease in the percent identified with moderate discrepancies from one-third to fewer than one-fifth of the identifications.

FIGURE 2. STANDARD SCORE DISCREPANCY



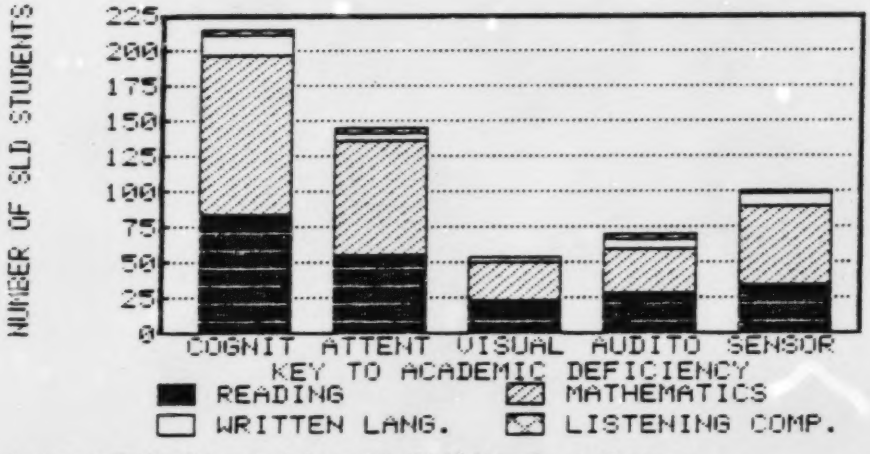
Processing Disorders

Processing difficulties were mentioned in the IEP for every student identified as having a specific learning disability. Many students had difficulties in more than one processing area. The processing disorder areas were termed somewhat differently in this year's study, to bring them in line with the new State criteria. Three areas, cognitive, attention and sensory-motor remained the same, with processing divided into auditory or visual, and with expression being eliminated. Of the five areas specified in the criteria, the cognitive area was mentioned most frequently--for 82 percent of the identified students. This area was followed by attention (specified for 56 percent of the students), and by sensory-motor (named for 37 percent of the students). Auditory and visual processing disorders were mentioned 26 and 20 percent of the time, respectively. The percent of students having each processing disorder identified, organized by academic disability area, is presented in Table 2 and illustrated in Figure 3. These percents differed little from those of the previous year (within five percent), except for sensory-motor disorders which had 20 percent fewer uses during 1982-83.

Table 2
Psychological Processing Disorders for Students
With Identified Specific Learning Disabilities
(Multiple Processing Disorders were Frequently Identified)

Academic Disability Area	TOTAL NO. STUDENTS	PSYCHOLOGICAL PROCESSING DISORDERS				
		COGNITIVE	ATTENTION	VISUAL PROCESSING	AUDITORY PROCESSING	SENSORY MOTOR
READING	100	84	57	24	29	35
ARITHMETIC	140	113	79	26	31	56
WRITTEN LANGUAGE	20	15	6	5	7	8
ORAL EXPRESSION	5	5	4	0	0	0
LISTENING COMPREHENSION	5	4	4	0	3	1
DUPLICATED COUNT	270	221	150	55	70	100
RELATIVE PERCENT	100%	82%	56%	20%	26%	37%

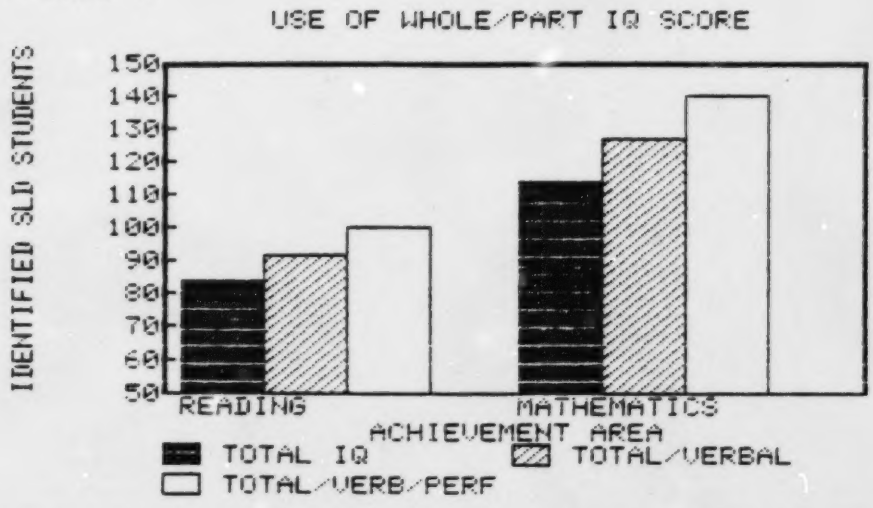
FIGURE 3. PSYCHOLOGICAL DISORDERS



Effect of Use of Whole or Sub-part Ability Test Scores

The criteria implementation guide adopted in San Juan in 1981 stipulated that the total ability test score was preferred for all identifications except for those cases in which the verbal score was higher than the total score. The guide specified that the performance score, alone, would not be used to calculate the discrepancy. Despite this specification, it was found that some thirty-two students were identified during the year based upon the performance score. The effect of using a total score, the higher of total or verbal, or the highest of total, verbal or performance was examined. In both reading and mathematics, the number of identifications increased by nearly ten percent with each additional score. This effect is shown in the graph presented as Figure 4.

FIGURE 4.



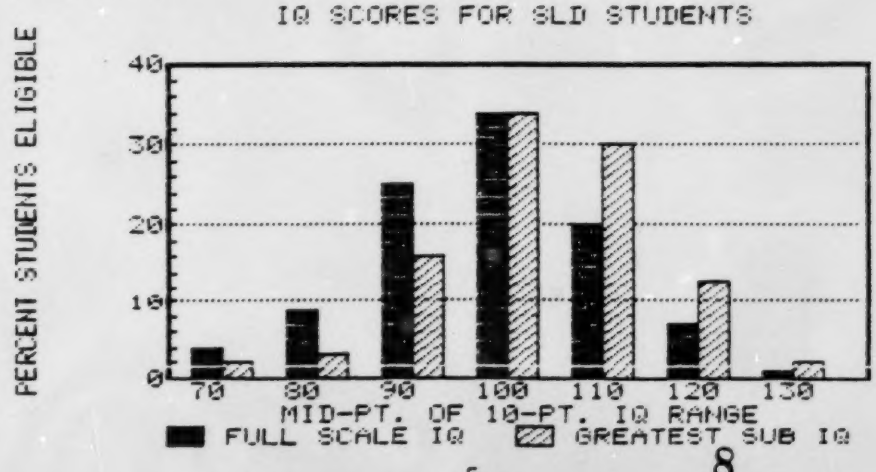
Higher Verbal Ability--There were 84 cases in which students had higher verbal than total ability scores. Half of these students had verbal scores no more than 5 points higher than their total scores, and 80 percent were no more than 10 points higher. In analyzing 1982-83 placements, an additional 21 students (10 percent) qualified for identification when the verbal score was used rather than the total.

Higher Performance Ability--There were 118 cases in which students had higher performance than full scale ability scores. For 43 percent of these students, the performance scores were within 5 points of their full scale scores, and nearly 80 percent (78%) were within 10 points of their full scale scores. Twenty-one percent had performance scores greater than 10 points from their full scale score.

In analyzing the effects of using the performance score rather than the higher of full scale or verbal, an additional 23 students (10 percent) qualified for identification when performance scores were allowed.

Ability Distribution--Total or full scale ability scores form a relatively normal distribution, while using the highest of the part or total scores forms a negatively skewed distribution. This change in the ability distribution is shown in Figure 5.

FIGURE 5.



Relationship Between Ability Scores--Correlations between the ability scores were .46 between the two part scores--verbal and performance. The part scores, however, had high correlations with the full scale score-- .84 for verbal and .85 for performance.

Effect of Using State-Specified Tables

Based upon the ability-achievement score discrepancy, with no allowance for measurement error, the number of students identified in 1982-83 under the new State criteria would be lower by 28 percent. If one standard error of measurement is allowed, as compensated for in the 1981 San Juan criteria, it appears that only two percent of students would not meet criteria. The application of different criterion values is presented in Table 3.

Table 3
Percent of 1982-83 Identified SLD Students
Meeting Various Criterion Values

	Under San Juan Criteria 82-3				Under State Criteria 83-4			
Academic	Without SEM		With SEM		Without SEM		With SEM	
Area	#	%	#	%	#	%	#	%
Reading (all tests)	85	85%	100	100%	72	72%	95	95%
WRAT	(66)		(77)		(61)		(75)	
PIAT	(6)		(6)		(4)		(6)	
WOODCOCK	(5)		(8)		(5)		(7)	
NELSON	(7)		(8)		(2)		(7)	
OTHER	(1)		(1)		(0)			
Math (all tests)	116	83%	140	100%	100	71%	140	100%
WRAT	(100)		(120)		(86)		(120)	
PIAT	(4)		(6)		(4)		(7)	
WOODCOCK	(6)		(7)		(6)		(7)	
OTHER	(6)		(7)		(4)		(6)	
Written Expression								
WOODCOCK	14	70%	20	100%	14	70%	20	100%
TOTALS	215	83%	260*	100%	186	72%	255	98%

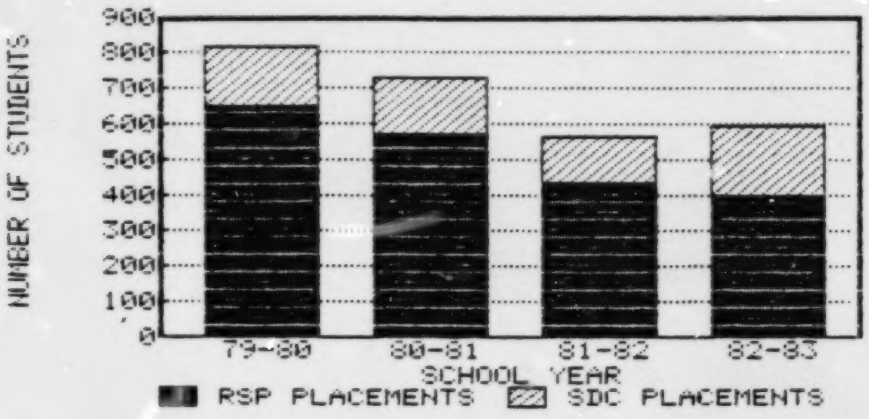
*This number is a duplicate count, including 45 students who qualified in more than one area.

Student Placements

Information on SLD student placements was gathered for the entire 1982-83 year. Of the total of 598 SLD identifications during the school year, 400 or two-thirds were placed in the Resource Specialist Program. The remaining 198 or one-third were placed in Special Day Classes.

In comparison with the previous year, slightly more students were placed in Special Day Classes. During 1981-82, 440 of 570 newly-identified SLD students or more than three-fourths were placed in RSP, with slightly less than one-fourth (23 percent) placed in SDC. This change in SLD placements is shown in Figure 6.

FIGURE 6. SLD IDENTIFICATIONS



Student Identifications

During the past four years, it was found that the implementation of new criteria in 1981 for SLD decreased the number of referrals, the number of identified SLD students, and the number of placements in RSP. Averaging the two years before implementation with the two years following new criteria implementation revealed a decline in identifications of 25 percent. There was a corresponding decline in RSP placements of nearly one-third (32 percent). These year-to-year changes are present in Figure 6 above. The decrease in SLD identifications produced a change in total special education enrollment from 10.6 percent in January, 1981 to 9.9 percent in December, 1982, nearly two years later.

Reactions of School Principals to SLD Criteria

Of the eighteen principals at all levels who were questioned about the impact of the SLD criteria revisions, 90 percent found the criteria appropriate for identifying SLD students. Principals mentioned different reasons for their approval; these are some of the statements made:

> The criteria have helped to qualify students with more severe needs.
> We are clearer about use of discrepancy between ability and achievement.
> The criteria allow for a wider spread of students with more needs.
> The students who are qualified are those that seem more appropriate to LD.
> The criteria help us to find students who were missed before.

Some of the effects found by San Juan principals after using the new criteria for one and one-half years included:

> Fewer students were identified;
> Students with severe learning problems who used to have to stay in regular classes were identified; and
> Some non-identified students with low ability and low achievement still need help, even if not qualified for special education.

Reactions of School Psychologists to SLD Criteria

A survey during the Spring of 1983 revealed that the majority of psychologists (18 of the 20) using San Juan's criteria to identify students with specific learning disabilities believed that the criteria were appropriate. Several (15 percent) believed that the criteria tended to "over-identify", and one believed that the criteria "under-identify." Nearly all (90 percent) found that their diagnosis of a basic psychological processing disorder was confirmed by others on the IEP team.

Summary of Findings

Effect--The use of discrepancy criteria during both 1981-82 and 1982-83 had no effect on the percent of referrals identified. It did, however, have an effect on the number of students referred for special education. Because fewer students were referred, fewer students were actually identified as having learning disabilities. The decrease in SLD identifications noted in both 1981-82 and 1982-83, and attributable to the discrepancy criteria, was 25 percent less than the number of identifications in 1979-80 and 1980-81. This decrease amounted to a 10 percent reduction in special education students--or about 1 percent of the total school population.

Principals and psychologists noted a change in the type of student eligible for special education service, from only low achieving students to students who had more "specific" learning problems.

Ability--The criteria permitted the identification within a broad range of ability, yet the typical student was of "average" ability.

Application--The criteria were used successfully with students referred for service during the 1981-83 school years. The IEPs documented that the identifications were not only based upon the ability-achievement discrepancy but that they took into account the type of psychological processing disorder which might be responsible for that discrepancy. Furthermore, the IEPs documented that the IEP team had considered and ruled out other causes for the discrepancy, and that modifications in the regular program had been unsuccessful in helping the student.